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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,660	02/05/2002	Yukihiro Noguchi	57810-030	4679

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EXAMINER

NGUYEN, KEVIN M

ART UNIT PAPER NUMBER

2674

DATE MAILED: 01/16/2004

A

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,660

Applicant(s)

NOGUCHI, YUKIHIRO

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/062,660, filed on 02/05/2002.

Information Disclosure Statement

2. The information disclosure statement (IDS) filed 02/05/2003 which has been placed in the application file, the information referred to therein has been considered as to the merits.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 7, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujiwara et al (IDS) (JP 05-181154).
5. As to claim 1, Fujiwara et al teach a liquid crystal panel comprising a display area (a liquid crystal panel 501, drawing 5, paragraph [0016])), a signal scanning driving circuit drives a plurality of scanning lines (scan electrodes r301,r302,...,r306), a signal line driving circuit drives a plurality of signal lines (signal electrodes c301,c302,...,c306) (page 3, paragraph [0017]), a signal driver and a scanning driver (not shown in the drawing 3) coupling the signal driving circuit connection parts pc1-pc6 and the scanning

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driving circuit connection part pr1-pr6 are arranged on the same peripheral side of said display area in a cascaded manner (drawing 3, abstract).

As to claims 7, 11, 12, Fujiwara et al review a conventional display area (a liquid crystal panel 901), a signal line driving circuit 903, and a scanning line driving circuit 902 (drawing 10, paragraph [0004]).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al

As to claim 2, Fujiwara et al teach a signal driver and a scanning driver (not shown in the drawing) coupling the signal driving circuit connection parts pc1-pc6 and the scanning driving circuit connection part pr1-pr6 are arranged on the same peripheral side of said display area in a cascaded manner (abstract). It would have been an obvious matter of design choice to relocate said scanning line driving circuit is arranged outward beyond said signal line driving circuit as taught by Fujiwara et al, since such a modification would have involved a mere change in relocate of a component because this would provide a large-sized display panel. Relocation is generally recognized as being within the level of ordinary skill in the art. In addition, the relocation of a well-

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known element is normally not directed toward patentable subject matter, In re Japikse, 86 USPQ 70 (CCPA 1950).

8. Claims 3, 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al in view of Applicant Admitted Prior Art (AAPA).

As to claim 3, Fujiwara et al teach all of the claimed limitations of claim 1, except for a plurality of shift registers, a plurality of buffers and a plurality of analog switches. However, AAPA reviews a conventional of the column driver comprising a plurality of shift registers 25, a plurality of buffers 26 and a plurality of analog switches 27 arranged in a cascaded manner (figure 8, page 3, lines 16-22). It would have been obvious to a person of ordinary skill in the art at the time of the invention to include the plurality of shift registers, the plurality of buffers and the plurality of analog switches are known reviewed by AAPA for Fujiwara et al's column driver circuit because this would improve the large-sized liquid crystal display panel.

As to claims 5 and 6, Fujiwara et al teach a wire (scanning electrodes r1-r6) and a scanning line driving circuit connection part pr1-pr6 (figure 3, and abstract). AAPA reviews shift registers, buffers and analog switches arranged adjacently thereto in a cascaded manner (figure 8, page 3, lines 16-22). It would have been obvious to a person of ordinary skill in the art at the time of the invention to include the plurality of shift registers, the plurality of buffers and the plurality of analog switches arranged adjacently thereto in a cascaded manner are known reviewed by AAPA for Fujiwara et al's column driver circuit because this would improve the a large-sized liquid crystal display panel.

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9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al in view of Hanari (US 6,437,775).

As to claim 4, Fujiwara et al teach all of the claimed limitations of claim 1, except for a first video signal line connected to said analog switches of odd stages, and a second video signal line connected to said analog switches of even stages. However, Hanari teaches a related liquid crystal display device which includes a first video signal line connected to said analog switches (8a, 8b) of odd stages, and a second video signal line connected to said analog switches (9a, 9b) of even stages (column 5, lines 30-40). It would have been obvious to a person of ordinary skill in the art at the time of the invention to a first video signal line connected to said analog switches of odd stages, and a second video signal line connected to said analog switches of even stages taught by Hanari for Fujiwara et al's driver circuit because this would improve the quality of the image being displayed, while removing a display defect in a specific pattern (column 6, lines 34-35 of Hanari).

10. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al in view of Hong et al (US 6,674,495).

As to claims 8, 9, Fujiwara et al teach all of claimed limitations of claim 1, except for a plurality of display panels. However, Hong et al teach a plurality of panel areas (110, 120, 130, 140, 150, 160) each including display area (111, 121, 131, 141, 151, 161) (figure 1, column 6, line 66 through column 7, line 2); said plurality of display panels are connected with each other at least on two sides of each said display panel other than the side provided with said column driver and row driver. It would have been

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obvious to a person of ordinary skill in the art at the time of the invention to utilize the plurality of panel areas (110, 120, 130, 140, 150, 160) each including display area (111, 121, 131, 141, 151, 161) taught by Hong et al for Fujiwara et al's display panel because this would increase an aperture ratio of the thin film transistor panels of LCD to improve a brightness of LCD (column 1, lines 35-37 of Hong et al).

As to claim 10, Hong et al teach six panel areas (110, 120, 130, 140, 150, 160) (figure 1, column 6, lines 66-67).

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al in view of Udo et al (US 6,304,241).

As to claim 13, Fujiwara et al teach all of the claimed limitations of claim 1, except for electroluminescence display. However, Udo et al teach electroluminescence panel (column 27, lines 15-16). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the electroluminescence panel taught by Udo for Fujiwara's liquid crystal display panel because the present invention may be embodied in a display device equipped with electroluminescence panel (column 27, lines 13-16 of Udo et al).

12. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al and Udo et al as applied to claims 1 and 13 above, and further in view of Ting (US 6,486,606).

As to claim 14, Fujiwara et al and Udo et al teach all of the claimed limitations of claim 1 and 13, except for a current supply line. However, Ting reviews a current source V_{supply} (figure 1, column 1, line 52). It would have been obvious to a person of ordinary

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skill in the art at the time of the invention to utilize the current source V_{supply} reviewed by Ting for Udo et al's electroluminescence panel because this would supply a current to drive an organic light-emitting diode (column 1, lines 52-53 of Ting).

As to claim 15, Fujiwara et al and Udo et al teach all of the claimed limitations of claim 1 and 13, except for a switching transistor, a capacitor, an EL element and a driving transistor. However, Ting reviews at least one pixel comprising a switching transistor (T1), a capacitor (C), an EL element (D) and a driving transistor (T2) (figure 1, column 1, lines 50-54). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the switching transistor, the capacitor, the EL element and the driving transistor reviewed by Ting for Udo et al's electroluminescence panel because this would drive and operate the electroluminescence panel.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9314 (for Technology Center 2600 only)

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Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
January 9, 2004